

Amendments to the Claims

The following Listing of Claims replaces all prior versions, and listings, of claims in the application.

Claims 1-11 are cancelled without prejudice or disclaimer to the subject matter claimed therein.

Add new claims 12-26.

Listing of Claims:

1-11. (Cancelled):

12. (New): A method for detecting a gene mutation comprising:

forming a double-stranded nucleic acid from:

- (i) a single-stranded target nucleic acid having a target base composed of one or more continuous bases and two partial sequences thereof with the target base there between;
- (ii) two single-stranded detecting nucleic acids complementary to the two partial sequences with the target base there between;

forming a hydrogen bond by the target base and a receptor by inserting a receptor having hydrogen bonding characteristics into the double-stranded nucleic acid; and
identifying the gene mutation where the receptor bonds to the target base.

13. (New): The method for detecting a gene mutation according to claim 12, wherein the receptor has a heterocyclic aromatic group and is stabilized by the formation of a hydrogen bond to the target base and a stacking interaction with the base adjacent to the receptor to form a pair with the target base.

14. (New): The method for detecting a gene mutation according to claim 13, wherein the receptor is at least one of a naphthylidine derivative, a quinoline derivative, a pteridine derivative, a coumarin derivative, an indazol derivative, an alloxazine derivative and amyloide.

15. (New): The method for detecting a gene mutation according to claim 12, wherein the receptor is fixed to a substrate and the double-stranded nucleic acid is formed by dropping on

the substrate the single-stranded target nucleic acid and the two single-stranded detecting nucleic acids.

16. (New): The method for detecting a gene mutation according to claim 15, wherein the gene mutation is identified on the basis of the change of a signal strength of a surface plasmon resonance due to the bond of the target base and the receptor.

17. (New): The method for detecting a gene mutation according to claim 12, wherein one detecting nucleic acid is fixed to a substrate and the double-stranded nucleic acid is formed by dropping on the substrate the single-stranded target nucleic acid, the other detecting nucleic acid and the receptor.

18. (New): The method for detecting a gene mutation according to claim 12, wherein the receptor shows fluorescence emitting characteristics and the gene mutation is identified as a change of fluorescence strength of the double-stranded nucleic acid into which the receptor is inserted.

19. (New): The method for detecting a gene mutation according to claim 15, wherein the receptor shows fluorescence emitting characteristics and the gene mutation is identified as a change of fluorescence strength of the double-stranded nucleic acid into which the receptor is inserted.

20. (New): The method for detecting a gene mutation according to claim 17, wherein the receptor shows fluorescence emitting characteristics and the gene mutation is identified as a change of fluorescence strength of the double-stranded nucleic acid into which the receptor is inserted.

21. (New): A kit for practicing the method of claim 12 comprising:

two single-stranded detecting nucleic acids complementary to two partial sequences thereof with a target base there between in a single-stranded target nucleic acid having the target base composed of one or more continuous bases; and

a receptor having hydrogen bonding characteristics and inserted into a double-stranded nucleic acid formed by the single-stranded target nucleic acid and the two detecting nucleic acids to form a hydrogen bond with the target base.

22. (New): The kit for detecting a gene mutation according to claim 21, further comprising a substrate to which the receptor is fixed.

23. (New): The kit for detecting a gene mutation according to claim 21, further comprising a substrate to which one detecting nucleic acid of the two single-stranded detecting nucleic acids are fixed.

24. (New): The kit for detecting a gene mutation according to claim 21, wherein the receptor shows fluorescence emitting characteristics.

25. (New): The kit for detecting a gene mutation according to claim 22, wherein the receptor shows fluorescence emitting characteristics.

26. (New): The kit for detecting a gene mutation according to claim 23, wherein the receptor shows fluorescence emitting characteristics.